

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing Of Claims:**

Claims 1-49 (Canceled)

50. (Currently Amended) A carrier comprising a matrix of inorganic, organic, or organic and inorganic material and containing a biomolecular interaction entrapped within the matrix, wherein the biomolecular interaction comprises two or more biological species that can be reversibly disrupted from the other under reversibly disrupting conditions, wherein the biological species are selected from the group consisting of proteins, polypeptides, peptides, amino acids, DNA, RNA and phospholipids.

51. (Previously Presented) The carrier of claim 50 wherein the biological species of the biomolecular interaction can under denaturing conditions be reversibly disrupted within the matrix and wherein the matrix in the denaturing conditions inhibits aggregation of the biological species.

52. (Previously Presented) The carrier of claim 51 wherein the carrier has a pore size that is selected to inhibit leaching out of the biomolecular interaction or biological species thereof.

53. (Previously Presented) The carrier of claim 52 wherein pore size of the carrier is selected to enable potential modulators of the biomolecular interaction to pass in and out of the matrix.

54. (Previously Presented) The carrier of claim 51 wherein the biological species of the biomolecular interaction can under naturing conditions associate with one another.

55. (Previously Presented) The carrier of claim 54 wherein the association between the biological species under naturing conditions is selected from the group consisting of one or more of: ionic bonds, hydrogen bonds, van der Waal's interactions, hydrophobic

interactions, dipole-dipole interactions, dipole-induced dipole interactions, and induced dipole-induced dipole interactions.

56. (Previously Presented) The carrier of claim 54 wherein the carrier has a pore size that is selected to inhibit leaching out of the biomolecular interaction or biological species thereof.

57. (Previously Presented) The carrier of claim 56 wherein pore size of the carrier is selected to enable potential modulators of the biomolecular interaction to pass in and out of the matrix.

58. (Previously Presented) The carrier according to claim 50 wherein the carrier comprises a silica based glass.

59. (Currently Amended) The carrier according to claim 50 wherein the inorganic material is selected from the group consisting of a silicon, titanium, vanadium cerium-based metal alkoxide, cerium-based metal alkoxide, alkylated metal alkoxide, an otherwise functionalized metal alkoxide, a corresponding metal chloride, silazane, polyglycerylsilicate, and other silicate precursors

60. (Previously Presented) The carrier according to claim 50 derived by a sol-gel processing method.

61. (Previously Presented) The carrier according to claim 60 wherein the biomolecular interaction is bioactive.

62. (Currently Amended) The carrier according to claim 61 wherein the carrier is pre-treated to contain components found in an animal fluid.

63. (Previously Presented) The carrier according to claim 62 wherein the pre-treatment is by immersion in a solution containing components found in an animal fluid for a period of up to about seven days prior to use.

64. (Previously Presented) The carrier according to claim 63 wherein the animal fluid is interstitial fluid.

65. (Previously Presented) The carrier according to claim 64 wherein the carrier is synthesized under sterile conditions or sterilized subsequent to synthesis using conventional sterilization methods.